

[Low graphics](#) | [Accessibility help](#)



[Watch](#) One-Minute World News

News services
Your news when you want it



News Front Page



- [Africa](#)
- [Americas](#)
- [Asia-Pacific](#)
- [Europe](#)
- [Middle East](#)
- [South Asia](#)
- [UK](#)
- [England](#)
- [Northern Ireland](#)
- [Scotland](#)
- [Wales](#)
- [UK Politics](#)
- [Education](#)
- [Magazine](#)
- [Business](#)
- [Health](#)
- [Science & Environment](#)
- [Technology](#)
- [Entertainment](#)
- [Also in the news](#)
- [Video and Audio](#)
- [Programmes](#)
- [Have Your Say](#)
- [In Pictures](#)
- [Country Profiles](#)
- [Special Reports](#)

Last Updated: Wednesday, 25 April 2007, 14:30 GMT 15:30 UK

[E-mail this to a friend](#)

[Printable version](#)

Mathematicians set Chinese test

Maths enthusiasts are being challenged to answer a sample question from Chinese university entrance tests.

The tests are set for prospective science undergraduates.

The UK's Royal Society of Chemistry is offering a £500 prize to one lucky but bright person who answers the question below correctly.

It has also published a test used in a "well known and respected" English university - the society is not naming it - to assess the strength of incoming science undergraduates' maths skills.

Try the two tests

A glance at the two questions reveals how much more advanced is the maths teaching in China, where children learn the subject up to the age of 18, the society says.

Science undergraduates in England are likely not to have studied maths beyond GCSE level at the age of 16, it says.

“ Schools and students are reluctant to consider A-level mathematics to age 18, because the subject is regarded as difficult ”

Richard Pike

[Pupils 'urged to drop maths'](#)

It has sounded a warning about Britain's future economic prospects which it claims are threatened by competition from scientists in China.

RSC chief executive Richard Pike says mathematics is seen as integral to the sciences in China and its economy.

"There, the concept of remedial courses at university would be inconceivable.

"UK chemistry departments are often world-renowned for their creativity; however, mathematics tests set in England by many universities for undergraduate chemistry students in their first term to diagnose remedial requirements are disconcertingly simple.

"They encapsulate the challenge facing this country," says Dr Pike.

But a maths professor in England, William Shaw, has said the emphasis in mathematics teaching varies from country to

SEE ALSO

[Pupils 'are urged to drop maths'](#)
24 Apr 07 | Education

RELATED INTERNET LINKS

[Royal Society of Chemistry](#)

The BBC is not responsible for the content of external internet sites

TOP EDUCATION STORIES

[Students demand action on loans](#)

[Assistants 'taking lessons alone'](#)

[Parent driver checks prompt row](#)

[RSS](#) | [News feeds](#)

MOST POPULAR STORIES NOW

[MOST SHARED](#)

[MOST READ](#)

[Putin warns against Iran attack](#)

[World's oldest person dies at 115](#)

[US marks 9/11 amid shooting scare](#)

[Facebook strips down to Lite site](#)

[Thatcher's fight against German unity](#)

[Deaths of cliff jump pair suicide](#)

[Rockets hit Israel from Lebanon](#)

[Loan deal saves Leibovitz images](#)

[Driver strangled boss in office](#)

[Crippling blow for Pakistan's Taliban](#)

[Most popular now, in detail](#)

RELATED BBC SITES

[SPORT](#)

[WEATHER](#)

[ON THIS DAY](#)

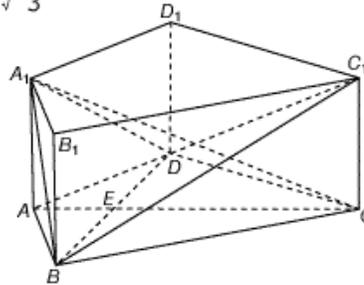
[EDITORS' BLOG](#)

country and the RSC's attack is "nonsense".

Anyone wishing to enter the competition should go to the RSC website and send the correct answer by Friday 27 April to be included in a prize draw.

National test set by Chinese education authorities for pre-entry students

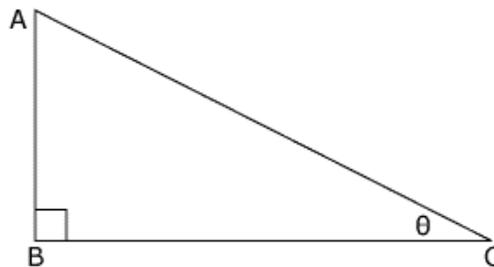
As shown in the figure, in square prism $ABCD-A_1B_1C_1D_1$,
 $AB=AD=2$, $DC=2\sqrt{3}$, $AA_1=\sqrt{3}$
 $AD\perp DC$, $AC\perp BD$, and foot of perpendicular is E ,



- (i) Prove: $BD\perp A_1C$:
- (ii) Determine the angle between the two planes A_1BD and BC_1D :
- (iii) Determine the angle formed by lines AD and BC_1 which are in different planes.

Diagnostic test set by an English university for first year students

In the diagram (not drawn to scale), angle ABC is a right angle, $AB = 3\text{m}$ $BC = 4\text{m}$



- (i) What is the length of AC
- (ii) What is the area of triangle ABC (above)?
- (iii) What is the $\tan\theta$ of the triangle ABC (above) as a fraction?

Source: Royal Society of Chemistry

[Return to link](#)

 [E-mail this to a friend](#)

 [Printable version](#)

FEATURES, VIEWS, ANALYSIS



Secrets of 1989
How far did Mrs Thatcher go to stop German unification?



Gender test row
South African views on Semenya
[Open](#)



Sign of decline?
Top leader's arrest is latest blow to Pakistan Taliban

Most Popular Now

The most shared story right now is: [World's oldest person dies at 115](#)

PRODUCTS & SERVICES	E-mail news	Mobiles	Alerts	News feeds	Podcasts
--------------------------------	-----------------------------	-------------------------	------------------------	----------------------------	--------------------------

MMIX

Most Popular Now | Traffic to this site is currently 1% above normal

[Back to top](#) ^^

[Help](#) | [Privacy and cookies policy](#) | [News sources](#) | [About the BBC](#) | [Contact us](#) |